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PATENTS  
Attorney Docket No. ABX-AE1 CON

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT APPLICATION

Applicants : Liise-anne Pirofski et al.  
Application No. : 10/714,079 Confirmation No. : 5765  
Filed : November 14, 2003  
For : HUMAN ANTIPNEUMOCOCCAL ANTIBODIES FROM  
NON-HUMAN ANIMALS  
Group Art Unit : 1645  
Examiner : Albert Mark Navarro

New York, New York 10020  
October 13, 2005

Hon. Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

Pursuant to 37 C.F.R. §§ 1.56 and 1.97(b), applicants  
hereby make the following documents of record in the above-  
identified patent application:

**U.S. Patent Documents**

<u>Patentee(s)</u>	<u>Patent No.</u>	<u>Filing Date</u>
Axel, et al.	4,399,216	08/16/1983
Cousens, et al.	4,510,245	04/09/1985
Axel, et al.	4,634,665	01/06/1987
Kaufman	4,740,461	04/26/1988

Kaufman, et al.	4,912,040	03/27/1990
Clark, et al.	4,959,455	09/25/1990
Koszinowski, et al.	4,968,615	11/06/1990
Stinski	5,168,062	12/01/1992
Axel, et al.	5,179,017	01/12/1993
Deboer, et al.	5,741,957	04/21/1998
Meade, et al.	5,750,172	05/12/1998
Denman, et al.	5,756,687	05/26/1998
Meade, et al.	5,827,690	10/27/1998
Hori, et al.	5,916,771	06/29/1999
Kucherlapati, et al.	5,939,598	08/17/1999
Jakobovits, et al.	5,985,615	11/16/1999
Jokobovits, et al.	5,998,209	12/07/1999
Kucherlapati, et al.	6,075,181	06/13/2000
Jakovobits, et al.	6,091,001	07/18/2000
Kucherlapati, et al.	6,114,598	09/05/2000
Jakobovits, et al.	6,130,364	10/10/2000

#### FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE
EP 0 216 846	01/10/1990
EP 0 256 055	08/28/1991
EP 0 323 997	04/21/1993
EP 0 338 841	03/22/1995
WO 91/10741	07/25/1991
WO 94/02602	02/03/1994
WO 96/34096	10/31/1996
WO 96/33735	10/31/1996
WO 98/16654	04/23/1998
WO 98/24893	06/11/1998
WO 98/50433	11/12/1998
WO 99/45031	09/10/1999
WO 99/53049	10/21/1999
WO 00/09560	02/24/2000
WO 00/037504	06/29/2000

## Other Documents

Abadi, J. et al., "Human Antibodies Elicited by a Pneumococcal Vaccine Express Idiotypic Determinants Indicative of V<sub>H</sub>3 Gene Segment Usage," *J. Infect. Dis.* 178:707-716 (1998)

Bowie, J.U., et al., "A Method to Identify Protein Sequences That Fold Into a Known Three-Dimensional Structure," *Science*. 253:164-170 (1991)

Chothia, C. & Lesk, A.M., "Canonical Structures for the Hypervariable Regions of Immunoglobulins," *J. Mol. Biol.* 196:901-917 (1987)

Chothia, C., et al., "Conformations of Immunoglobulin Hypervariable Regions," *Nature* 342:877-883 (1989)

Green, L.L. & Jakobovits, A., "Regulation of B Cell development by Variable Gene Complexity in Mice Reconstituted with Human Immunoglobulin Yeast Artificial Chromosomes," *J. Exp. Med.* 188:483-495 (1998)

Green, L.L., et al., "Antigen-Specific Human Monoclonal Antibodies from Mice Engineered with Human Lg Heavy and Light Chain Yacs," *Nature Genet.* 7:13-21 (1994)

Holliger, P., et al., "'Diabodies': Small Bivalent and Bispecific Antibody Fragments," *Proc. Natl. Acad. Sci. U.S.A.* 90:6444-6448 (1993)

Johnson, G & Wu, T.T., "Kabat Database and its Applications: Future Directions," *Nucl. Acids Res.* 29:205-206 (2001)

Kaufman, R.J. and Sharp, P.A., "Amplification and Expression of Sequences Cotransfected with a Modular Dihydrofolate Reductase Complementary DNA Gene," *J. Mol. Biol.* 159:601-621 (1982)

Kostelny, S.A., et al., "Formation of a Bispecific Antibody by the Use of Leucine Zippers," *J. Immunol.* 148:1547-1553 (1992)

McCormick, L.L., et al., "Bispecific Antibodies Overcome the Opsonin-Receptor Mismatch of Cystic Fibrosis In Vitro: Restoration of Neutrophil-Mediated Phagocytosis and Killing of *Pseudomonas aeruginosa*," *J Immunol.* 158:3474-3482 (1997)

Mendez, M.J., et al., "Functional Transplant Of Megabase Human Immunoglobulin Loci Recapitulates Human Antibody Response in Mice," *Nat. Genet.* 15, pp. 146-156 (1997)

Mukherjee, J. et al., "Molecular Characterization of the Humoral Responses to *Cryptococcus neoformans* Infection and Glucuronoxylomannan-Tetanus Toxoid Conjugate Immunization," *J. Exp. Med.* 177:1105-1116 (1993)

Pirofski, L., et al., "Analysis of Human Monoclonal Antibodies Elicited by Vaccination with a *Cryptococcus neoformans* Glucuronoxylomannan Capsular Polysaccharide Vaccine," *Infect. Immun.* 63:3005-3014 (1995) and *Infect. Immun.* 68:1820-1826 (2000)

Russell, N.D., et al., "Production of Protective Human Antipneumococcal Antibodies by Transgenic Mice with Human Immunoglobulin Loci," *Infection Immunity* 68:1820-1826 (2000)

Russell, N.D., et al., "A Tale of Two Pathogens: Human Antibody Immunity to *Cryptococcus neoformans* and *Streptococcus pneumoniae*," *Einstein Quart. J. Biol. Med.* 15:148-157 (1998)

Songsilvilai, S. & Lachmann, P.C., "Bispecific antibody: a tool for diagnosis and treatment of disease," *Clin. Exp. Immunol.* 79:315-321 (1990)


Thornton, J.M., et al., "Prediction of progress at last," *Nature* 354:105-106 (1991)

Traunecker, A., et al., "Bispecific single chain molecules (Janusins) target cytotoxic lymphocytes on HIV infected cells," *EMBO J.* 10:3655-3659 (1991)

Traunecker, A., et al., "Janusin: New molecular design for bispecific reagents," *Int. J. Cancer Suppl.* 7:51-52 (1992)

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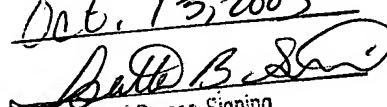
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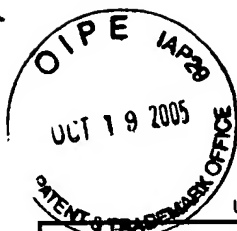


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Substitute for form 1449A/B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(Use as many sheets as necessary)</i>				<b>Complete if Known</b>	
				Application Number	10/714,079
				Filing Date	November 14, 2003
				First Named Inventor	Liise-anne Pirofski
				Art Unit	1645
				Examiner Name	Albert Mark Navarro
Sheet	1	of	3	Attorney Docket Number	ABX-AE1 CON

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		4,399,216	08/16/1983	Axel, et al.	
		4,510,245	04/09/1985	Cousens, et al.	
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		WO 98/16654	04/23/1998			
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

NON PATENT LITERATURE DOCUMENTS			
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		Abadi, J. et al., "Human Antibodies Elicited by a Pneumococcal Vaccine Express Idiotypic Determinants Indicative of V <sub>H</sub> 3 Gene Segment Usage," <i>J. Infect. Dis.</i> 178:707-716 (1998)	
		Bowie, J.U., et al., "A Method to Identify Protein Sequences That Fold Into a Known Three-Dimensional Structure," <i>Science</i> . 253:164-170 (1991)	
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		Johnson, G & Wu, T.T., "Kabat Database and its Applications: Future Directions," <i>Nucl. Acids Res.</i> 29:205-206 (2001)	
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		Kostelny, S.A., et al., "Formation of a Bispecific Antibody by the Use of Leucine Zippers," <i>J. Immunol.</i> 148:1547-1553 (1992)	
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		<i>neoformans</i> Infection and Glucuronoxylomannan-Tetanus Toxoid Conjugate Immunization," <i>J. Exp. Med.</i> 177:1105-1116 (1993)	
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		Songsilvilai, S. & Lachmann, P.C., "Bispecific antibody: a tool for diagnosis and treatment of disease," <i>Clin. Exp. Immunol.</i> 79:315-321 (1990)	
		Thornton, J.M., et al., "Prediction of progress at last," <i>Nature</i> 354:105-106 (1991)	
		Traunecker, A., et al., "Bispecific single chain molecules (Janusins) target cytotoxic lymphocytes on HIV infected cells," <i>EMBO J.</i> 10:3655-3659 (1991)	
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